

## Submillimetre Fourier Transform Spectroscopy of Jupiter, Uranus and Neptune

D. A. Naylor (U. Lethbridge), G. R. Davis (U. Saskatchewan), M. J. Griffin (QMW, London), T. A. Clark (U. Calgary)

Planetary spectroscopy at submillimetre wavelengths is a potentially rich field for the study of minor species because it is the region of maximum intensity for the rotational lines of many potential atmospheric constituents.

Our previous attempts to measure submillimetre planetary spectra from the JCMT were hindered by problems associated with the facility bolometric detector which was not designed for broadband astronomical spectroscopy. In this paper we present preliminary results from the commissioning run of a new dual polarization detector system which has been specifically developed for use with our Fourier transform spectrometer at the JCMT. Following a brief review of the salient features of the detector and spectrometer, we will present spectroscopic observations of Jupiter, Uranus and Neptune obtained during August 1996 from the JCMT. The paper will conclude with an analysis of the sensitivity of this technique and plans for future observations.

Division for Planetary Sciences Abstract Form

DPS Category 12

Running #7446

Session 0.00

Invited ☐ Poster presentation ☒ Title only ☐

Have you received your Ph.D. since the last DPS meeting?

Yes ☐ No ☐

Is your abstract newsworthy, and if so, would you be willing to prepare a news release and be available for interviews with reporters?

Yes ☐ No ☐ Maybe ☐

Paper presented by David Naylor

Department of Physics  
University of Lethbridge

Lethbridge Alberta T1K 3M4 CANADA  
Phone: 403 329 2426  
Fax: 403 329 2057  
Email: Naylor@hg.uleth.ca

Special instructions: Tue Aug 27 16:21:22 CDT 1996

Membership Status (First Author):

DPS-AAS Member ☒ Non-Member ☐

Student Member ☐ Student Non-Member ☐

Is this your first DPS presentation? Yes ☐ No ☐

Sponsor:

Abstract submitted for 1996 DPS meeting

Date submitted: LPI electronic form version 5/96